

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

NCS MULTISTAGE INC.
NCS MULTISTAGE, LLC,

Plaintiffs,

vs.

TCO AS,

Defendant.

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CIVIL ACTION NO. 6:20-cv-00622-ADA

**PLAINTIFFS' REPLY IN
SUPPORT OF ITS OPENING CLAIM CONSTRUCTION BRIEF**

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TCO proposes odd constructions for terms not actually in dispute, constructions that are inconsistent with the specification and designed to exclude embodiments, and constructions the Court already rejected in the Nine litigation. NCS respectfully requests the Court deny TCO's proposed constructions.

A. The Person Of Skill in the Art

TCO's expert opines that a POSA has a bachelor's degree, master's degree, and/or Ph.D. in mechanical or petroleum engineering. Dkt. 69-17 ¶ 34. NCS's expert, Dr. Rodgers, strongly disagrees that such a person would qualify as a POSA because they would have no industry exposure, would not recognize oil- and gas-industry terms (*e.g.*, "casing ID," "floating casing"), and would be unfamiliar with downhole tools (*e.g.*, rupture discs, their design and implementation in wellbores). *See* Rodgers Suppl. Decl. ¶ 2 (attached hereto as Exhibit A)¹; Dkt. 67-3 ¶ 15.

B. "sealed chamber" (claims 8, 14, 22, 36, 40, 42, 46, and 50)

NCS's Proposed Construction	TCO's Proposed Construction
Plain and ordinary meaning	Substantially fluid-tight chamber where the rupture disc forms an upper seal of the chamber, a float device forms a lower seal of the chamber, and a casing string there between.

TCO does not deny it is asking the Court to narrow the term "sealed chamber" to specific components described in a specification embodiment. That, alone, makes TCO's proposed construction improper. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005).

TCO's basis for the narrow construction is that the term "sealed" chamber does not have a plain and ordinary meaning, but it cites no intrinsic or extrinsic evidence to support that statement. Dkt. 69 at 7. On the other hand, citing to both the patent specification and an expert declaration, NCS showed that the term "sealed chamber" is not ambiguous and has clear meaning to a POSA.

¹ Dr. Rodgers' supplemental declaration incorporates by reference his declaration submitted in the Nine litigation (Nine Dkt. 41-1).

Dkt. 67 at 7–8. TCO is also wrong that a POSA cannot explain the plain meaning of a term to a jury. Plain and ordinary meaning is not a term’s meaning to a lay person; rather it is a term’s meaning to a POSA in view of the patent specification. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). A POSA must explain that meaning to the jury; if they could not, then every technical term in a claim would have to be construed.

TCO also argues that “NCS chose to be its own lexicographer” as to “sealed chamber,” but does not explain under claim-construction law how the patentee clearly set forth a definition of this term inconsistent with the plain meaning, or otherwise clearly disavowed claim scope. Dkt. 69 at 8; *Phillips*, 415 F.3d at 1316. All TCO points to is a description of a “sealed chamber” in the patent specification. Dkt. 69 at 8. That is insufficient evidence that the patentee acted as its own lexicographer as to that term. Put simply, TCO is improperly trying to limit “sealed chamber” to a disclosed embodiment.

Finally, TCO does not dispute or address that its construction attempts to narrow “sealed” chamber to embodiments described in later dependent claims, violating basic claim differentiation principals. For these foregoing reasons, the Court should reject TCO’s proposed construction.

C. “within the upper and lower ends” (claims 1, 8, 14-15, 22-25, 27-29, 36-43, 46, 50-53, and 55-57)

NCS’s Proposed Construction	TCO’s Proposed Construction
Plain and ordinary meaning	Inside of the upper and lower ends

TCO alleges that this term has no plain and ordinary meaning but, again, fails to point to any evidence of that in the intrinsic and extrinsic record, or even explain why the term is confusing. Dkt. 69 at 9. For those reasons alone, the Court should reject TCO’s proposed construction.

TCO also argues applying plain and ordinary meaning leaves the term’s scope unanswered, *id.*, but does not explain how the scope of this term is in dispute between the parties—the only

basis for which a term requires construction. *O2 Micro*, 521 F.3d at 1360. As NCS’s opening brief explained, no actual dispute as to the term’s scope exists. Dkt. 67 at 9–11. TCO, without any actual support, tries to replace “within” (a common word used in the specification) with “inside” (which is not in the specification and arguably excludes embodiments). *Id.* at 10–11. Indeed, the specification support upon which TCO relies in its brief uses the word “within.” Dkt. 69 at 9. There is no reason for this replacement.

TCO turns to extrinsic evidence, arguing that a dictionary’s definition of “within” supports its proposed construction. Dkt. 69 at 9–10. Conversely, NCS’s plain-meaning proposal is based on the intrinsic record, where the specification describes the rupture disc being initially held “within the upper and lower ends” of a tubular member. Dkt. 67 at 9–10.

TCO further argues that NCS is attempting to re-write the term “within” to mean “between,” and that those two terms are in the claim and thus are presumed to have different meanings. Dkt. 69 at 10. NCS has proposed no such construction and, instead, contends that the term “within” has a plain and ordinary meaning needing no construction. Dkt. 67 at 11.

TCO also argues that NCS’s plain-and-ordinary-meaning position is inconsistent with the “evolution of the claim language” during prosecution. Dkt. 69 at 10. TCO just references a claim amendment during prosecution, *id.*, and points to nothing in the prosecution history to suggest the patentee intended the term “within” to mean anything other than its plain and ordinary meaning.

Finally, TCO ignores NCS’s argument that TCO’s proposed construction is unnecessary, confusing, and arguably excludes embodiments by suggesting the rupture disc be simultaneously located inside both of the upper and lower ends of the tubular. Dkt. 67 at 10–11.

D. Preamble: “A float tool configured for use in positioning a casing string in a wellbore...the casing string having an internal diameter” (claims 1, 28, 30, and 31)

NCS’s Proposed Construction	TCO’s Proposed Construction
No construction necessary, as the preamble is not limiting	The preamble is limiting because when read in the context of the entire claim, the preamble either recites limitations of the claim, or, is necessary to give life, meaning, and vitality to the claim limitations.

TCO does not contest that the bodies of independent claims 1 and 28 recite a structurally complete rupture disc assembly but, instead, argues that the preamble must be limiting because the claim’s body references the “casing string” described therein. Dkt. 69 at 11–12. TCO’s own case law confirms that the claim’s body referring to the preamble’s “casing string” does not automatically make the preamble limiting. *Shoes by Firebug LLC v. Stride Rite Children’s Grp.*, 962 F.3d 1362, 1367 (Fed. Cir. 2020) (holding “antecedent basis alone is not determinative of whether a preamble is limiting” and finding preamble does not limit the claim where it merely cites an intended purpose and the claim’s body “recites a structurally complete invention”). The ultimate question is whether the preamble “recites essential structure” or “is necessary to give life, meaning, and vitality to the claim.” *Catalina Mktg. Int’l v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (internal quotation omitted). That is not the case here. In claims 1 and 28, the claimed apparatus is a rupture disc assembly. Dkt. 67 at 12. The preamble merely describes an intended purpose of the rupture disc assembly, *e.g.*, it is “configured for use in positioning a casing string.” *Id.* TCO does not dispute that.

Nevertheless, TCO argues that the preamble must be limiting because the claim’s body compares the orientation of the rupture disc assembly’s inner walls to the casing string’s internal diameter. *See* Dkt. 69 at 11–12. The casing string is simply a reference point to describe the geometry of the rupture disc assembly’s internal structure, but it is not a rupture disc assembly

component. A POSA does not need to look to the preamble to understand this limitation because a POSA understands that a casing string is a pipe with an internal diameter, and that when the claimed rupture disc assembly is threaded to casing, their inner surfaces are parallel. The rupture disc's components are described in the claim's body.

Shoes by Firebug, as cited by TCO, is easily distinguishable. There, the claim preamble of one challenged patent recited “[a]n internally illuminated textile footwear,” and the claim body recited an “illumination system being housed within the footwear.” 962 F.3d at 1365 (emphasis added). That lawsuit's issue was whether the claim was limited to textile footwear or footwear in general. Because the claim relied on “footwear” in the preamble for antecedent basis and that footwear was a specific type described in the preamble, the Federal Circuit found the claim limited to “textile” footwear. *Id.* at 1368. In other words, the claim was directed to the footwear which the preamble described as a particular footwear, *i.e.*, textile footwear. That is not the issue here.

Here, the claim is directed to a rupture disc assembly, but the preamble does not describe a particular type of rupture disc assembly. Dkt. 67 at 12. Further, the claim does not describe a rupture disc assembly and casing string. *See id.* The “casing string” is not a structural limitation in the claim's body. The reference to the “casing string” in the body is a reference point to describe the geometry of the rupture disc assembly's internal structure, not a rupture disc assembly element.

Finally, TCO argues that the preamble is limiting because NCS purportedly relied on the “casing string” structure in the preamble to obtain an allowance. Dkt. 69 at 11–12. That is untrue. The Examiner allowed the claims because the prior art did not disclose a rupture disc attached to *parallel* walls inside the rupture disc assembly. For the foregoing reasons, TCO's attempt to limit the claims to the preamble should be rejected.

E. Method Claims 22 and 50 are Not Mixed Method-Apparatus Claims

TCO does not dispute the law that a claim is not indefinite as a mixed method-apparatus claim unless “it is unclear whether infringement . . . occurs when one creates a system that allows the user to [practice the claimed method step], or whether infringement occurs when the user actually [practices the claimed method step].” *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005); *see also* Dkt. 69 at 12. Instead, TCO argues that NCS misapplies *Microprocessor Enhancement Corp. v. Texas Instruments, Inc.*, 520 F.3d 1367 (Fed. Cir. 2008), because that case had a method claim with a different format. Dkt. 69 at 13.

TCO is right that the *Microprocessor* claim format was different, but that fact supports NCS, not TCO. There, the Federal Circuit considered a poorly drafted method claim that included a preamble within a preamble structure, but, notwithstanding the confusing language, it found the claim to be a valid method claim because it was clear when one infringed. 520 F.3d at 1374–75. Here, NCS’s method-claim formats are not confusing. They recite a method of running casing and floating casing using a novel rupture disc assembly. *See* Dkt. 67 at 13. This is an accepted and common format. It is also clear when one infringes these claims. Direct infringement occurs when a user **runs** casing string in a well, the casing string having a sealed chamber created by the recited rupture disc assembly, and **floats** the casing string in the wellbore fluid. *Id.* at 14.

TCO does not dispute any of that. Rather, it argues the claims are ambiguous because TCO would not know if it were liable for contributory infringement at the time that it manufactured the rupture disc assembly, or at the time that its customer used that assembly while running and floating casing string. Dkt. 67 at 13–14. There is no ambiguity. Contributory infringement occurs only at the time when there is direct infringement of the claim. *See Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004) (emphasis added) (“[C]ontributory infringement[] can only arise in the presence of direct infringement, though the direct infringer is

typically someone other than the defendant.”). Direct infringement of these claims occurs when TCO’s customers use the accused assembly sold by TCO to run and float casing string. At that moment, TCO would be liable for contributory infringement.²

Finally, TCO spends over five pages of its brief arguing NCS achieved allowance of the method claims by arguing that the recited rupture disc assembly is novel over the prior art. Dkt. 69 at 14–19. TCO argues that NCS thus intended to procure a mixed method-apparatus claim. *Id.* at 19. That argument is ridiculous. A method of using a novel apparatus is a common, accepted, and proper claim format. *Animal Care Sys., Inc. v. Hydropac/Lab Prod., Inc.*, No. 13-CV-00143-MSK-BNB, 2015 WL 535566, at *11 (D. Colo. Feb. 9, 2015) (“Claim 17 refers only to the method by which such an apparatus is used and thus, does not constitute an impermissibly ‘mixed’ claim.”). And one way to distinguish that method from the prior art is by showing the prior art methods did not use the novel apparatus. Further, NCS’s purported intent is a fiction and irrelevant to the claim’s actual scope. Of course, TCO cites no law to support its position that NCS’s prosecution arguments or purported intent somehow morph a straightforward method claim into a mixed method-apparatus claim. Again, the only relevant legal issue is whether an accused infringer can determine when it infringes the claim, and that is easily recognizable here.

F. “rupture burst pressure” (claims 1, 8, 14-15, 22-25, 27-29, 36-43, 46, 50-53, and 55-57)

NCS’s Proposed Construction	TCO’s Proposed Construction
No construction.	a hydraulic pressure sufficient to break the rupture disc (i.e. the pressure at which the disc would break in response to hydraulic pressure alone)

² See also *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 850–51 (Fed. Cir. 2010) (citations omitted) (“A party is liable for contributory infringement if that party sells, or offers to sell, a material or apparatus for use in practicing a patented process. That ‘material or apparatus’ must be a material part of the invention, have no substantial noninfringing uses, and be known (by the party) to be especially made or especially adapted for use in an infringement of such patent.”).

TCO does not address the lack of an actual dispute as to this term’s scope, nor that the Court considered this term in a larger phrase and did not construe it. *See* Dkt. 67 at 14. The specification unambiguously defines this term as “the pressure at which hydraulic pressure alone causes rupture of the disc.” Dkt. 67-2 at 3:1–3 (emphasis added). TCO does not contest that definition, so there is no basis to construe this term.

TCO claims it wants the Court to construe the term consistently with its specification definition but only if the Court replaces “rupture” with “break” because the specification allegedly distinguishes these terms. Dkt. 69 at 19–20. TCO is wrong; the specification does not distinguish these terms. In fact, it defines “rupture burst pressure” as “the pressure at which the disc would break in response to hydraulic pressure alone.” Dkt. 67-2 at 9:65–67 (emphasis added). Further, even if the specification distinguished the two terms (which it does not), TCO provides no basis to change “rupture,” found in the claims and the Court’s Nine litigation constructions, to “break.” Introducing a different word into the claims for no legitimate reason would just confuse the jury.

G. “region of the tubular member where the rupture disc is attached...is parallel to the internal diameter of the casing string” (claims 1, 22, 28, and 50)

Court’s Construction	TCO’s Construction
Plain and ordinary meaning where the plain and ordinary meaning is “in the region of the tubular member, the rupture disc is directly secured to and in sealing engagement with a cylindrical surface that is wider than and parallel to the inner surface of the casing string”	Indefinite

Contrary to TCO’s brief, NCS does not propose a construction for this term; the Court has already construed it. *See* Dkt. 67 § II.F, Terms Previously Construed by the Court. TCO rejects the Court’s construction and asks it to find this term indefinite based on Nine’s *Markman* argument that two features having no inherent direction cannot be parallel. Dkt. 69 at 20–21. The Court has already rejected this argument, and TCO offers no new support. While TCO relies on a short

opinion from its expert on this issue, Dkt. 69-17 ¶¶ 58–62, its expert’s opinion is no different than that of Nine’s expert (Nine Dkt. 42-1 ¶¶ 63–67). So as not to overburden the Court with redundant briefing, if the Court wishes to consider TCO’s duplicative arguments, NCS refers the Court to its Nine litigation counterarguments and declaration. *See* Pl.’s Claim Construction Reply Br. 3–7 (Nine Dkt. 48 at 4–8) (attached hereto as Exhibit B); Dkt. 67-3 ¶¶ 46–47.

TCO’s only other argument is that when one substitutes the Court’s construction into the claim “it is evident that the claim term is indefinite.” Dkt. 69 at 21. TCO does not explain why. There is nothing confusing about the claim when adding the Court’s construction to it.

H. “rupturing force” (claims 14-15, 22-25, 27, 29, and 56)

Court’s Construction	TCO’s Construction
“a hydraulic pressure or impact force sufficient to rupture the rupture disc”	a hydraulic pressure sufficient to disengage the securing mechanism (i.e., a disengaging pressure)

NCS does not propose a construction for this term; the Court already has construed it. TCO rejects the Court’s construction and asks it to find the term indefinite based, again, upon Nine’s already-rejected arguments. Dkt. 69 at 21–22. So as not to overburden the Court with redundant briefing, if the Court wishes to consider TCO’s duplicative arguments, NCS refers the Court to its Nine litigation counterarguments and declaration. *See* Ex. B at 8; Dkt. 67-3 ¶¶ 48–49.

I. “the rupture disc is...configured to rupture when exposed to a rupturing force greater than the rupture burst pressure” (claims 1, 22, 29, and 56)

Court’s Construction	TCO’s Construction
the rupture disc can rupture when exposed to a rupturing hydraulic pressure greater than the rupture burst pressure	the rupture disc can rupture when exposed to a rupturing hydraulic pressure <u>equal to</u> or greater than the rupture burst pressure

TCO does not dispute that neither the claim language nor the specification describes the rupturing force as being “equal to” the rupture burst pressure. TCO argues that the Court’s construction is inconsistent with specification part that describes the multi-step process where the

disc is exposed to a hydraulic pressure so that the disc disengages and then moves in the downhole direction to rupture on an impact surface. *See* Dkt. 69 at 22–23. That specification part is irrelevant to this term because this term has nothing to do with the disc’s disengagement or its subsequent rupture. It simply describes the disc configuration, standing alone. The disc is designed, *e.g.*, based on its material and shape, to rupture when exposed to a certain hydraulic pressure above its rupture burst pressure. The term “equal to” is made up.

J. “specific gravity of the well fluid” (claims 24 and 52)

Court’s Construction	TCO’s Construction
Plain and ordinary meaning	Indefinite

Yet again, contrary to what TCO says, NCS does not propose a construction for this term, as the Court has already given this term its plain and ordinary meaning. Relying on its expert, TCO argues that the term is indefinite because temperature and pressure vary with well depth. Dkt. 69 at 23. The Court, however, already rejected this argument when Nine and its expert made it. So as not to overburden the Court with redundant briefing, if the Court wishes to consider TCO’s duplicative arguments, NCS refers the Court to its Nine litigation counterarguments and declaration. *See* Ex. B at 9; Dkt. 67-3 ¶ 50.

Finally, TCO argues the term is indefinite because the specific gravity of a gas is not comparable to that of a liquid, as they use different reference values. Dkt. 69 at 23. Despite using different reference values, a POSA understands that either reference value can be adjusted to make the comparison. Ex. A ¶ 3. Indefiniteness turns on whether a POSA can understand the claim in light of the specification, and that is clearly the case here. Specific gravities are density ratios. *See id.* A POSA understands that the fluid-filled chamber must be less dense than the surrounding well-bore fluid, so that it floats. *See* Ex. B at 9. Moreover, a POSA knows that a gas will be less dense than wellbore fluid. There is nothing ambiguous about the claim’s scope.

Dated: May 7, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that all counsel of record were electronically served with a copy of the foregoing on May 7, 2021, via the Court's CM/ECF system.

/s/ Domingo M. LLagostera

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